

Clean Water

starts with you

The DNR tests waters throughout Iowa to make sure they are meeting state water quality standards. Those standards are in place to protect drinking water, aquatic life and recreational uses, like swimming. When a stream or lake doesn't meet those standards, the stream or lake is placed on the state's impaired waters list. The DNR then creates a plan which outlines ways Iowans can help improve the water quality in their community's lakes and streams.

DNR needs your input

Every Iowan needs the help of their fellow citizens and watershed groups to improve water quality in their community. If you or your group would like to meet with a DNR staff member to discuss water quality, please contact Chris Van Gorp at (515) 281-4791 or Chris.VanGorp@dnr.state.ia.us



For more information on water quality improvement plans, please visit www.iowadnr.com/water/watershed/

Five Island Lake

Pollutant: *Algae and turbidity*

Pollution Sources: *Row crop agriculture*



Five Island Lake needs your continued help. While the lake just barely meets the criteria to be considered "impaired," we need to resolve those problems.

As you'll read below, the DNR is putting together a plan outlining the lake's problems and possible solutions. But it's up to you to make sure those solutions are put into effect. A cleaner Five Island Lake depends on you.

phosphorous are causing the lake to appear "too green."

These algae blooms and cloudy water make the lake less appealing, both visually and for recreational uses like swimming.

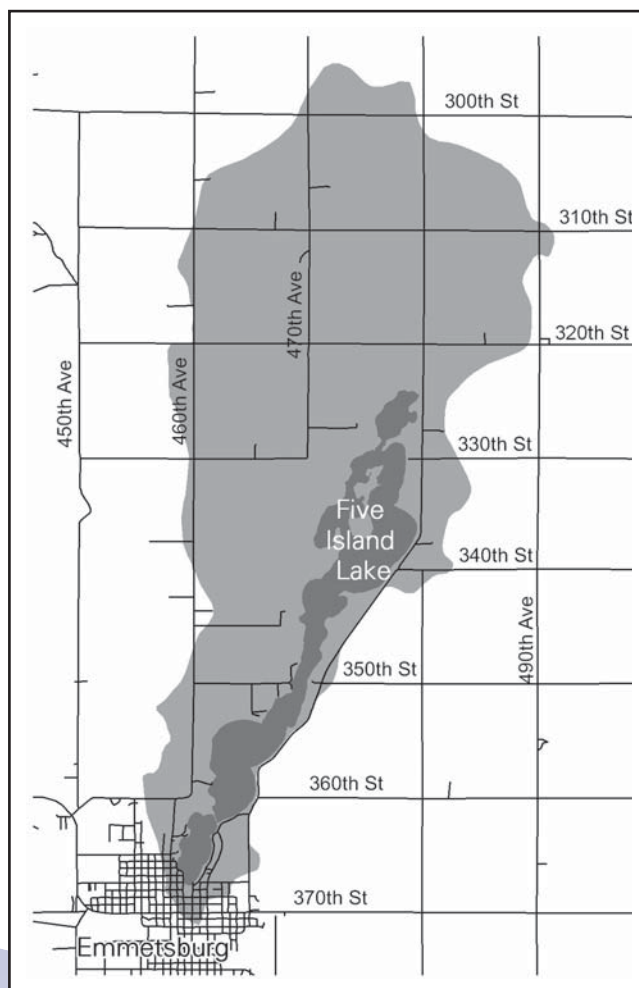
However, the algae blooms and cloudy water do not pose a specific human health threat.

What's wrong with Five Island Lake?

Five Island Lake is a 964-acre natural lake just north of Emmetsburg. The quality of water in the lake is marginal, hovering around the threshold for impairment. Slightly elevated levels of algae and

The map to the right shows the Five Island Lake watershed shaded in gray.

A watershed is an area of land that drains into a body of water. In this case, all land shaded in gray drains into Five Island Lake.



What is causing the problem?

Most pollution in the Five Island Lake watershed (the area of land that drains into the lake) comes from nonpoint sources, or sources that are not easily traced back to a specific “point,” like a wastewater treatment or industrial plant.

In the Five Island Lake watershed, nonpoint sources include areas of row crop, park, permanent grass and pasture. The watershed is 8,689 acres.

To reduce the amount of nutrients reaching the lake, changes in land and lake management will be needed. It will take time to make these changes and to see the effects.

What can be done to improve Five Island Lake?

The ultimate goal is to improve water quality and remove the lake from the state’s impaired waters list. To do that, the levels of algae blooms need to be reduced and water clarity needs to be improved.

Using research results and with the help of the public, the DNR is developing a water quality improvement plan (also known as a TMDL, or total maximum daily load).

The plan will help reduce the amount of pollutants reaching Five Island Lake. A water quality improvement

plan is a suggestion to local communities on how they can improve their area’s water quality.

The recent dredging at Five Island Lake has improved its water quality. In addition, the DNR would like to use research findings from the improvement plan to help the local community develop a strategy to continue improving Five Island Lake.

While the DNR has done the background research and can provide some technical and funding assistance, it is ultimately up to the watershed residents and businesses to take action and clean up the lake.

Goals for Five Island Lake

The DNR has identified goals that must be met to make a significant improvement in water quality at Five Island Lake.

Total phosphorus and algae levels need to be reduced initially by at least 1.5 percent. Reducing total phosphorus will result in less algae in the lake.

Installing conservation practices in the watershed can help us to achieve these goals. Similarly, the lake may also need changes to in-lake management to improve water quality and enhance recreational opportunities.

What’s Next

By helping the DNR create the water quality improvement plan for Five Island Lake, you’re helping create the game plan for cleaning up the lake. When it’s time to take that plan and put it into action, the DNR can offer technical and funding assistance. But a cleaner Five Island Lake depends on your continued support.

Land Use in the Five Island Lake Watershed

